



# United States Department of the Interior

Fish and Wildlife Service  
Arizona Ecological Services Office  
9828 N. 31st Avenue Ste C3  
Phoenix, AZ 85051

Telephone: (602) 242-0210 Fax: (602) 242-2513



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## Memorandum

To: Regional Director, Fish and Wildlife Service, Albuquerque, New Mexico  
(ARD-ES) (Attn: Marty Tuegel)

From: <sup>ACTING</sup> Field Supervisor, Fish and Wildlife Service, Phoenix, Arizona

Subject: Reinitiation of Intra-Service Biological Opinion Regarding the Proposed Reissuance of an Enhancement of Survival Permit (TE-205294-1) and Approval of a Safe Harbor Agreement Amendment with the City of Phoenix for the Rio Salado Project, Maricopa County, Arizona

This memorandum represents an addendum to the Biological Opinion (BO), and reinitiation of consultation, pursuant to Section 7 of the Endangered Species Act of 1973 (Act) (16 U.S.C. 1531-1544), as amended, on the issuance of a Section 10(a)(1)(A) enhancement of survival permit (Permit) authorizing the incidental take of the recently listed yellow-billed cuckoo (*Coccyzus americanus*) (cuckoo) by the City of Phoenix (Permittee) as a part of the Safe Harbor Agreement of 2011. There is no proposed critical habitat in the project area to consider. Along with the permit application, the City of Phoenix submitted a draft Safe Harbor Agreement Amendment (Amendment) to add the cuckoo to the agreed upon measures benefiting the Yuma Ridgway's (clapper) rail (*Rallus longirostris yumanensis*) and the southwestern willow flycatcher (*Empidonax traillii extimus*). This Amendment was available for public review for 30 days (81 FR 59238). No public comments were received and the Amendment has been finalized.

The Agreement, established in June 2011, covered lands owned by the Permittee and the proposed operations and maintenance actions of the Rio Salado habitat restoration project. No changes to funding, responsibilities of parties, or effects of the Agreement have changed. Therefore, all actions and responsibilities of the Parties will be referenced to the 2011 Agreement. This BO addendum only analyzes the potential effects of the reissuance of this Permit and implementation of the Amendment on the yellow-billed cuckoo. We have determined that this action "may affect" the cuckoo. The Federal action under consideration is the issuance of a permit covering environmental restoration activities on the 595 acres of land within the Salt River and adjacent land from approximately 24<sup>th</sup> Street to the 19<sup>th</sup> Avenue Bridge, Phoenix, Maricopa County, Arizona.

This BO addendum is based on information provided in the original BO for the final Agreement, the Amendment request, telephone conversations, field investigation, and other sources of information. Literature cited in this BO is not a complete bibliography of all literature available

on the species of concern, activities covered in the Agreement and Amendment and their effects, or on other subjects considered in this BO. A complete administrative record of this consultation is on file at the Arizona Ecological Services Office.

## **CONSULTATION HISTORY**

December 10, 2008: City of Phoenix submits application for a section 10(a)(1)(A) enhancement of survival permit and a draft Safe Harbor Agreement for the Rio Salado Ecosystem Restoration Project.

April 6, 2011: BO is finalized

June 8, 2011: Rio Salado Safe Harbor Agreement is finalized with associated permit and BO

August 11, 2015: The Service receives correspondence requesting an Amendment to the Agreement from the City of Phoenix. A draft Amendment is attached and comments are subsequently provided.

April 25, 2016: Draft BO, Environmental Action Compliance form, and Amendment sent to the City of Phoenix for review

May 31, 2016: Comments received from the City of Phoenix

July 1, 2016: Package for the Proposed Amendment sent to the Regional Office

August 29, 2016: Notice of Availability published in the Federal Register for public comment (81 FR 59238)

November 16, 2016: Package with BO, finalized Amendment, and package for the permit application sent to the RO

## **BIOLOGICAL OPINION**

### **DESCRIPTION OF PROPOSED ACTION**

#### **General**

The proposed action is the issuance of a section 10(a)(1)(A) enhancement of survival permit supportive of the Amendment. The 10(a)(1)(A) permit issued for the 2011 Agreement has no changes. The purpose of the Amendment is to include the yellow-billed cuckoo on the list of affected species within the Rio Salado Project Area. This Amendment follows the Service's Safe Harbor Agreement final policy (64 FR 32717), and final regulations (64 FR 32706), as revised (69 FR 24084), and pursuant to (50 CFR 17.22 and 17.32), and further implements the intent of the Permittee and Service to follow the procedural and substantive requirements of section 10(a)(1)(A) of the Act.

No species other than the cuckoo are covered in this Amendment, and assessments for all other affected species can be found in the Agreement and associated Biological Opinion (USFWS 2011, p. 2). The analyses in the original BO remain current and in effect. Furthermore, the actions the Permittee agrees to carry out, as well as the assurances the Safe Harbor program allows (USFWS 2011, p. 3), have not changed.

The Amendment serves as the basis for re-issuance of an Enhancement of Survival permit under Section 10(a)(1)(A) of the Act for incidental take of covered species associated with maintenance of the voluntary conservation efforts and public use of the enrolled lands. In the event of a decision by the Permittee to return any enrolled site or sites within the Rio Salado Project Area to baseline conditions, and after a 60-day notification that would provide the Service a reasonable opportunity to capture and/or relocate any potentially affected covered species, the permit would authorize the Permittee to return the site or sites to baseline conditions. Neither the Amendment nor the associated permit would authorize deliberate direct take of covered species (i.e. capture, collection, harm, hunt etc.). The Permittee and Service anticipate that the maximum level of take authorized under the Amendment and associated permit may never be realized. Permit issuance will not preclude the need for the Permittee to abide by all other applicable Federal, State, and local laws and regulations that may apply.

As long as the Permittee continues to implement the agreed-upon voluntary conservation measures detailed in the Agreement, and maintains baseline responsibilities on the enrolled lands, the Permittee may continue to landscape, control invasive species, provide for public recreational uses, maintain flood conveyance capacity, or make any other lawful use of the enrolled lands, even if such uses result in incidental take of individual covered species or occupied habitat. Whenever possible, prior to conducting such an action that the Permittee reasonably anticipates take to occur, the Permittee must give the Service a minimum 30-day advance notice and an opportunity to relocate and rescue individuals.

### **Stipulations**

The responsibilities that both the Permittee and Service agreed to in 2011 will carry over to include the cuckoo. For a full description of the stipulations agreed upon, please refer to the 2011 BO, page 4. In summary they are as follows.

#### **Permittee continues to agree to:**

1. Establish habitat for conservation of the cuckoo, including cottonwood-willow and mesquite bosque. The habitat will be managed as described in the 2011 Management Activities.
2. Provide reports to the Service on the cuckoo, and other species covered in the Agreement, regarding fatalities, injuries, or diseases observed in the enrolled lands. These reports will continue to be submitted annually on March 1 for activities occurring during the previous calendar year.
3. Notify the Service 30 days in advance of any planned land management activity (such as wetland draining, storm drain outfall maintenance, trail maintenance, controlled burn, fencing, construction, or tilling) that the Permittee reasonably anticipates will result in the

take of the covered species on the enrolled lands; and provides the Service a reasonable opportunity to capture and/or relocate any potentially affected covered species. The Permittee may proceed with the planned activity unless the Service requests an opportunity to exercise its right under this paragraph, in writing, within 20 days of receiving the Permittee's notice. Land management activities may take place immediately if the Permittee determines them essential to protect public health and/or safety, in which case the Service will be notified as soon as possible.

4. Notify the Service at least 30 days in advance of any change to the enrolled land's management that the Permittee reasonably anticipates will result in the loss of individuals of the covered species or occupied habitat, including 60 days prior notification for returning the enrolled property to baseline conditions; and identify the actions that would result in changed management or return to baseline.
5. Monitor and report on compliance with this Amendment and Agreement based on recommendations and goals relating to the covered species in the 2011 Monitoring and Adaptive Management Plan. No changes are anticipated to that Plan.
6. Allow reasonable access to the enrolled lands by the Service, or another agreed-upon party, for purposes of carrying out monitoring and management activities.
7. Fund the project as described in the 2011 Agreement.

The Service continues to agree to:

1. Provide technical assistance, to the maximum extent practicable, when requested by the Permittee; and provide information on Federal funding programs relating to the management of endangered species and their habitat.
2. Upon execution of the Amendment and satisfaction of all other applicable legal requirements, issue an Enhancement of Survival permit to the Permittee in accordance with Section 10(a)(1)(A) of the Act, authorizing the incidental take of the cuckoo as a result of lawful activities within the enrolled property that were described in the 2011 Agreement and incorporated here through reference. The term of the permit will expire on June 8, 2061 to coincide with the expiration date of the original permit (50 years from the issuing date of June 8, 2011). The permit shall not impose additional requirements or limitations beyond those expressly provided in this Amendment and applicable regulation.
3. Ensure that the Permittee is implementing the terms laid out in the Agreement, and carried over into this Amendment
4. Perform or assist with biological monitoring, unless conducted solely by the Permittee. The Service shall provide written notice of the desired access at least 30 days in advance. In the event of an emergency, the Service may enter the premises to care for and protect covered species at any time after contacting the landowner.

**Management Activities**

All management activities that were established and agreed upon for the 2011 Safe Harbor Agreement will continue to be carried out to the best of the Permittee's abilities, and this Amendment makes no changes to the activities. These activities and their descriptions can be found in the 2011 BO on pages 5, 6 and 7.

## **Monitoring and Adaptive Management Plan**

Like the Management Activities, this Amendment makes no changes to the Monitoring and Adaptive Management Plan described in the 2011 Agreement.

The general monitoring strategy will continue to the extent practicable and feasible, and the Permittee will conduct surveys for the covered species listed in the Agreement, with the cuckoo added to the permit through this Amendment. At a minimum, the Permittee will conduct annual field trips to evaluate the development of habitats and compare them to currently accepted definitions of habitat. Habitat quality will be determined based on information contained in existing survey protocols and recovery plans. The Service and the Arizona Game and Fish Department (AGFD) will continue to participate when possible.

As habitat develops for the cuckoo, the Permittee will strive to perform annual surveys for the covered species. Any surveys conducted will be performed in accordance with existing protocols accepted by the Service and by individuals holding the necessary permits issued by the Service and AGFD. Audubon Arizona, which continues to operate the Nina Mason Pulliam Rio Salado Audubon Center in the Rio Salado Project Area at Central Avenue, will continue to assist with the surveys.

### **Yellow-billed cuckoo**

At this time, it is anticipated that habitat may become available for the yellow-billed cuckoo in the low flow channel between Central Avenue and 7<sup>th</sup> Avenue. Upon development of suitable habitat, the area will be surveyed using established call stations along a permanent transect. The number of stations will vary depending on the presence of habitat patches, but shall be enough to adequately cover the area. It is estimated that no less than five sample points will be used. Audubon Arizona has committed to assist with the cuckoo surveys in addition to the other bird surveys associated with the Agreement.

The Service and the Permittee may mutually agree to decrease the frequency of surveys if detection of the cuckoo is deemed unlikely.

### **Annual Reports**

Annual reports will continue to be due March 1 of each year, and copies will be made available for review by the Service. In addition to the content specified in the 2011 Agreement, annual reports will include the following information and descriptions:

1. An estimate of the population size or acreages of occupied cuckoo habitat and productivity on the enrolled lands, and any conservation measures implemented during the year that might benefit the cuckoo. The results of any surveys and information on the sightings of individuals will also be included. The annual report will denote whether the data provided are from the Permittee, professional scientist, or other specific individual or entity. Photographs at data points and affected areas will be provided.
2. What management of non-native species is being done to favor the successful establishment and survival of native plant communities will continue.

3. Descriptions of actions that continue to control vectors and other potential public health hazards.
4. Trash, litter, and debris, will continue to be removed from the enrolled lands. Dead or dying vegetation will only be removed if it impacts public health or safety or if replanting will occur. Such actions do not have to be included in the annual report unless the action is significant.
5. Descriptions of the water quality that will continue to be monitored as required in the Arizona Pollution Discharge Elimination System permit.

## **STATUS OF THE SPECIES**

### **Yellow-billed cuckoo**

#### *Description*

Adult yellow-billed cuckoos have moderate to heavy bills, somewhat elongated bodies and a narrow yellow ring of colored bare skin around the eye. The plumage is grayish-brown above and white below, with reddish primary flight feathers. The tail feathers are boldly patterned with black and white below. They are a medium-sized bird about 12 inches in length, and about 2 ounces in weight. Males and females differ slightly; the males have a slightly smaller body size, smaller bill, and the white portions of the tail tend to form distinct oval spots. In females the white spots are less distinct and tend to be connected (Hughes 1999).

Morphologically, yellow-billed cuckoos throughout the western continental United States and Mexico are generally larger, with significantly longer wings, longer tails, and longer and deeper bills (Franzreb and Laymon 1993). Birds with these characteristics occupy the Western Distinct Population Segment (DPS) and we refer to them as the “western yellow-billed cuckoo.” Only the Western DPS was listed as a threatened species (USFWS 2014a). Yellow-billed cuckoos in the West arrive on breeding grounds 4 to 8 weeks later than eastern yellow-billed cuckoos at similar latitude (Franzreb and Laymon 1993, Hughes 1999).

#### *Distribution*

Based on historical accounts, the western yellow-billed cuckoo was formerly widespread and locally common in California and Arizona, more narrowly distributed but locally common in New Mexico, Oregon, and Washington, and uncommon along the western front of the Rocky Mountains north to British Columbia (AOU 1998, Hughes 1999). The species may be extirpated from British Columbia, Washington, and Oregon (Hughes 1999). The western yellow-billed cuckoo is now very rare in scattered drainages in western Colorado, Idaho, Nevada, and Utah, with single, nonbreeding birds most likely to occur (USFWS 2014a, 2014b). The largest remaining breeding areas are in southern and central California, Arizona, along the Rio Grande in New Mexico, and in northwestern Mexico (USFWS 2014b).

In Arizona, the species was a common resident in the (chiefly lower) Sonoran zones of southern, central, and western Arizona; scarce in the north-central part of the state, and very rare in the

northeast (Phillips et al. 1964). In Arizona, the yellow-billed cuckoo now nests primarily in the central and southern parts of the state.

Yellow-billed cuckoos spend the winter in South America, east of the Andes, primarily south of the Amazon Basin in southern Brazil, Paraguay, Uruguay, eastern Bolivia, and northern Argentina (Ehrlich et al. 1992, AOU 1998). Wintering yellow-billed cuckoos generally use woody lowland vegetation near fresh water. However, wintering habitat of the western yellow-billed cuckoo is poorly known.

### *Habitat*

Western populations of yellow-billed cuckoos are most commonly found in dense riparian woodlands, consisting primarily of cottonwood (*Populus fremontii*), willow (*Salix* spp.), and mesquite (*Prosopis* spp.), along riparian corridors in otherwise arid areas (Laymon and Halterman 1989, Hughes 1999). Occupied riparian habitat in Arizona may also contain box elder (*Acer negundo*), Arizona alder (*Alnus oblongifolia*), Arizona walnut (*Juglans major*), Arizona sycamore (*Platanus wrightii*), oak (*Quercus* spp.), netleaf hackberry (*Celtis reticulata*), velvet ash (*Fraxinus velutina*), Mexican elderberry (*Sambucus mexicanus*), tamarisk (*Tamarix* spp.; also called salt cedar), acacia (*Acacia* spp.), and seepwillow (*Baccharis glutinosa*) (Corman and Magill 2000, Corman and Wise-Gervais 2005, USFWS unpubl. data). Tamarisk may be a component of breeding habitat, but there is usually a native riparian tree component within the occupied habitat (Gaines and Laymon 1984, Johnson et al. 2008a, McNeil et al. 2013, Carstensen et al. 2015).

In most of the range, western yellow-billed cuckoos primarily breed in riparian habitat along low-gradient (surface slope less than 3%) rivers and streams, and in open riverine valleys that provide wide floodplain conditions (greater than 325 ft). However, in the Southwest, cuckoos can also breed in higher gradient drainages, and narrower and drier reaches of riparian habitat. Western yellow-billed cuckoos in Arizona will also use areas of mesquite and oak woodlands some distance from riparian gallery forests, including in the mountains of southeastern Arizona. Recent surveys found yellow-billed cuckoos with some regularity in these non-traditional habitats (Corman and Magill 2000, Westland Resources, Inc. 2011, 2013a, 2013b, 2013c, 2015a, 2015b, 2015c; Tucson Audubon 2015a, 2015b).

### *Threats*

The primary threat to the western yellow-billed cuckoo is loss or fragmentation of high-quality riparian habitat suitable for nesting (Corman and Wise-Gervais 2005, USFWS 2014a, 2014b). Habitat loss and degradation from several interrelated factors include alteration of flows in rivers and streams, encroachment into suitable habitat from agricultural and other development activities on breeding and wintering grounds, stream channelization and stabilization, diversion of surface and ground water for agricultural and municipal purposes, livestock grazing, wildfire, establishment of nonnative vegetation, drought, and prey scarcity due to pesticides (Ehrlich et al. 1992, USFWS 2014a). Pesticide use is widespread in agricultural areas in the western yellow-billed cuckoo breeding range in the United States and northern Mexico. Yellow-billed cuckoos have also been exposed to the effects of pesticides on their wintering grounds, as evidenced by

DDT found in their eggs and eggshell thinning in the United States (Grocki and Johnston 1974, Laymon and Halterman 1987, Hughes 1999, Cantu-Soto et al. 2011). Because much of the species' habitat is in proximity to agriculture, the potential exists for direct and indirect effects to a large portion of the species in these areas through altered physiological functioning, prey availability, and, therefore, reproductive success, which ultimately results in lower population abundance and curtailment of the occupied range (Laymon 1980, Laymon 1998, Hughes 1999, Colyer 2001, Mineau and Whiteside 2013, Hopwood et al. 2013, Mineau and Palmer 2013, USFWS 2014a).

The ongoing threats, including small isolated populations, cause the remaining populations to be increasingly susceptible to further declines and local extirpations through increased predation rates, barriers to dispersal by juvenile and adult yellow-billed cuckoos, chance weather events, fluctuating availability of prey populations, collisions with tall vertical structures during migration, defoliation of tamarisk by the introduced tamarisk leaf beetle (*Diorhabda* spp.), increased fire risk, and climate change events (Thompson 1961, McGill 1975, Wilcove et al. 1986). The warmer temperatures already occurring in the southwestern United States may alter the plant species composition of riparian forests over time. An altered climate may also disrupt food availability for the western yellow-billed cuckoo if the timing of peak insect emergence changes in relation to when the cuckoos arrive on their breeding grounds to feed on this critical food source.

Habitat for the western yellow-billed cuckoo has been modified and curtailed, resulting in only remnants of formerly large tracts of native riparian forests, many of which are no longer occupied by western yellow-billed cuckoos. Despite recent efforts to protect existing, and restore additional, riparian habitat in the Sacramento, Kern, and Colorado Rivers, and other rivers in the range of the western yellow-billed cuckoo, these efforts offset only a small fraction of historical habitat that has been lost. Therefore, we expect the threat resulting from the combined effects associated with small and widely separated habitat patches to continue to affect a large portion of the range of the western yellow-billed cuckoo.

#### *Presence in Arizona*

In a survey in 1999 that covered 265 mi (426 km) of river and creek bottoms (a subset of statewide cuckoo habitat), 172 yellow-billed cuckoo pairs and 81 single birds were located in Arizona (Corman and Magill 2000). Yellow-billed cuckoo populations greater than 10 pairs are found at 12 locations in Arizona: Bill Williams River, Colorado River, Gila River, Upper Cienega Creek, Hassayampa River, San Pedro River, Santa Maria River, Verde River, Sonoyta Creek, Santa Cruz River, Altar Valley, and Agua Fria River. Sites with smaller populations are found at the Roosevelt Lake complex, Upper Tonto Creek, Pinto Creek, Sycamore Creek in the Pajarito Mountains, Oak Creek, Lower Cienega Creek, Babocomari River, Pinal Creek, Bonita Creek, San Bernardino NWR, Hooker Hot Springs, Big Sandy River, and numerous other small drainages. However, much drainage have not been thoroughly surveyed, and it is likely that some additional yellow-billed cuckoo locations will be discovered. These include, but are not limited to the mountain ranges of southeastern Arizona; Eagle Creek; and along the Gila, San Francisco, and Blue Rivers.



## ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, State, or private actions in the action area, the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation, and the impact of State and private actions which are contemporaneous with the consultation process. The environmental baseline defines the current status of the species and its habitat in the action area to provide a platform to assess the effects of the action now under consultation.

### Status of the species within the action area

Yellow-billed cuckoos are not known to occur in the project area, and vegetation communities that are structurally suitable for nesting are generally lacking. Yellow-billed cuckoos require dense stands of riparian vegetation such as cottonwood and willow stands in close proximity to moist soils for nesting and successful foraging. There is no proposed critical habitat within the project area.

### Factors affecting the species' environment within the action area

Due to upstream river management of dams and reservoirs, this portion of the Salt River in the project area receives little water from the Salt River watershed. Available water in the project area is currently limited to runoff from storm drain and effluent discharge from the City of Tempe's Kyrene Road wastewater treatment facility, also known as the Tempe drain. This effluent does, however, support some limited wetland and riparian vegetation within the project area. The area is used by bikers, equestrians, and hikers, and includes educational programs for school children to learn about riparian ecosystems and nature.

The majority of the Phoenix Reach of the Rio Salado is primarily barren uplands and riverbed, though desert broom (*Baccharis sarothroides*) and rabbitbrush (*Crysothamnus nauseosus*) occur sparsely and sporadically. Stream side terraces are dominated by scattered desert scrub species such as creosotebush (*Larrea tridentate*), brittlebush (*Encelia farinose*), buckwheat (*Eriogonum* sp.), desert sage (*Salvia carnosae*), mesquite, palo verde, salt cedar, fountain grass (*Pennisetum setaceum*), crabgrass (*Digitaria sanguinalis*), and fescue (*Festuca myuros*). Established after construction of the Rio Salado low flow channel in 2001, the most significant vegetation occurs along the existing low flow channel between 7<sup>th</sup> Avenue and Central Avenue where dense stands of cattail (*Typha* sp.) and bulrush (*Scirppus* sp.) are found.

## EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action, which will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

The proposed action will authorize the issuance of the 10(a)(1)(A) permit for the yellow-billed cuckoo. The Permittee agrees to voluntarily manage the enrolled lands in a manner designed to produce a net conservation benefit to the covered species, by implementing the conservation measures described in the Agreement that carry into this Amendment to increase species populations and enhance, restore, and/or maintain suitable habitat. It is anticipated that the net conservation benefit will be sufficient to contribute, directly or indirectly, to the recovery of the covered species after taking into account the length of the original Agreement and the activities stipulated in the Agreement that may not permanently conserve (or recover) covered species populations or their habitats, but do provide important benefits to the covered species. These benefits include: maintenance, restoration, and enhancement of habitat; maintenance and increase of population numbers or distributions; increase in habitat connectivity; reduction of habitat fragmentation; establishment of buffers for other protected areas; creation of areas for testing and implementing new conservation strategies, and public education concerning threatened and endangered species and ways to protect them.

The Permittee and Service anticipate that continuation of the Agreement and issuance of this Amendment will result in an increased number and/or distribution of the covered species, and/or an increase in the total area of occupied suitable habitat, within the enrolled lands, consistent with recovery goals. Without this cooperative effort, we anticipate that these lands would not otherwise be utilized, to any significant degree, by the covered species in the foreseeable future. The Agreement and Amendment will also continue to provide an example of a mutually beneficial relationship between government agencies for the benefit of endangered and threatened species, and may provide evidence that such species can coexist with current land-use practices.

The environmental improvement efforts of the 595 acres of desert river and riparian vegetation that includes a diversity of native plant species will continue as planned. The following associations have been based upon the identified species within this Amendment and the habitat that will exist within the enrolled lands. The associations made in the Agreement are not changed. The cuckoo requires riparian cottonwood-willow galleries (tamarisk is also used by the cuckoo rarely), with dense understory foliage an important factor in nest site selection, while cottonwood trees are important in foraging areas. There are approximately 25 acres of cottonwood/willow association and wetland marsh habitat, but currently there is no suitable nesting habitat for the cuckoo in the project area. Continued development of riparian vegetation may in the future lead to use of the area by cuckoos for nesting and/or foraging. If such occupancy occurs, the permit issued will cover the Permittee for any take caused from habitat maintenance or related activities.

Management and monitoring of the action area will create passive recreational opportunities, while ensuring the conservation of the riparian zone and protection of the listed species. The proposed action also provides for the Permittee to return the enrolled lands to baseline condition, which could result in loss of nesting or foraging habitat for cuckoos. If this were to occur, the Service would have the opportunity to remove the listed species. However, we anticipate that the effects of the Amendment and activities it covers, which authorize the take of listed species,

will provide a net conservation benefit to the covered species through improved habitat condition for the species.

## **CUMULATIVE EFFECTS**

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions which are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to Section 7 of the Act.

Environmental restoration, as described in the Agreement, is sponsored by the U.S. Army Corps of Engineers and the City of Phoenix. These restoration actions include installing walking paths outside habitat areas, viewing areas for watching wildlife, ramadas, restrooms, and interpretive signs. The action area is within the City of Phoenix boundaries, which leads to an expectation of high visitor numbers every year. These actions and expectations are not expected to negatively affect the net conservation benefit. Much of the southwestern United States, including the greater Phoenix area, is still expected to be affected by drought and other climate conditions.

## **CONCLUSION**

After reviewing the current status of the cuckoo and its environmental baseline for the action area, the effects of the proposed issuance of the enhancement of survival permit, and the cumulative effects, it is the FWS's biological opinion that the issuance of the permit, as proposed, is not likely to jeopardize the continued existence of the yellow-billed cuckoo. Critical habitat for the species has not been designated within the action area, and therefore will not be affected. We base these conclusions on the following:

1. The length of the Permit and conservation goals will increase the availability of habitat for listed species and provide for their expansion into new areas.
2. Habitat restoration and/or improvements will provide for species reproduction and/or dispersal by developing and maintaining habitats that can support these functions.
3. The return to baseline conditions is not expected to impact existing populations of the yellow-billed cuckoo.

The conclusions of this Biological Opinion are based on the full implementation of the project as described in Description of the Proposed Action section in the Agreement, including the Conservation Measures that were incorporated into the project design.

## **INCIDENTAL TAKE STATEMENT**

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to

listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

This Amendment, applying the actions and activities described above and in the Agreement, will be implemented to provide a net conservation benefit to the cuckoo covered by the Section 10(a)(1)(A) permit. Anticipated effects likely to result from the proposed actions and the return to the baseline conditions by participants under the Amendment have been identified in the Amendment. All management activities described in the Amendment and the Section 10(a)(1)(A) permit are hereby incorporated by reference as reasonable and prudent measures and terms and conditions within the incidental take statement pursuant to 50 CFR 402.14(i). Such terms and conditions are non-discretionary and must be undertaken for the exemptions under section 10(a)(1)(A) and section 7(o)(2) of the Act to apply. If Phoenix fails to adhere to these terms and conditions, the protective coverage of the Section 10(a)(1)(A) permit and Section 7(o)(2) may lapse. However, the Service and Phoenix may agree that modifications to the management activities are needed. The process for modifications in management activities to be incorporated is described within the Agreement. These new modifications will be incorporated as reasonable and prudent measures, superseding the former management activities.

#### **AMOUNT OR EXTENT OF TAKE**

Safe Harbor Agreements and Amendments are written in anticipation of "take" of the covered species at some point in the future. Take cannot occur below the established baseline for a covered site. Take is expected to occur as a result of conservation activities, otherwise legal activities, and the potential return to baseline at the termination of the Agreement and therefore this Amendment and its associated section 10(a)(1)(A) permit. Measures will be implemented to prevent or reduce levels of direct incidental take of individuals; however, incidental take of the yellow-billed cuckoo could result under a variety of circumstances as described in the Proposed Action. The maximum level of incidental take anticipated are all yellow-billed cuckoos occurring in the action area associated with the loss of the habitat for the species that would be created through the original Agreement and through the return to baseline condition. Predicting how many individuals will utilize the action area is difficult because of the dynamic and stochastic influence of riverine processes on riparian and wetland ecosystems. However, for the yellow-billed cuckoo, based on the amount of habitat that could be created, it is unlikely that more than one or two pairs of cuckoo would nest or forage in the area in any one year and thus be lost through a return to baseline condition.

#### **EFFECT OF THE TAKE**

In the accompanying biological opinion, the Service has determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

## **REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS**

The Service believes the following reasonable and prudent measure is necessary and appropriate to minimize or avoid impacts of incidental take to the Yellow-billed cuckoo.

1. The Service shall require that the Permittee comply with and implement the issued section 10(a)(1)(A) enhancement of survival permit and the Agreement, and require the Permittee to report their findings.

In order to be exempt from the prohibitions of section 9 of the Act, the Permittee must comply with the following terms and conditions, which implement the reasonable and prudent measure described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

- i. The Service shall include the Amendment's conservation measures in the issued permit.
- ii. Reports will include information from population monitoring, incidental take, and all other actions undertaken to implement the Amendment. Reports will be completed annually for the term of the permit.

Review requirement: The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize incidental take that might otherwise result from the proposed action.

### **Disposition of Dead or Injured Listed Species**

Upon locating a dead, injured, or sick listed species initial notification must be made to the Service's Law Enforcement Office, 4901 Paseo Del Norte NE, Suite D, Albuquerque, New Mexico, 87113, telephone: 505-248-7889 within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to this office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve the biological material in the best possible state.

## **CONSERVATION RECOMMENDATIONS**

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. Coordinate with the AGFD, City of Tempe, Corps, and other affected stakeholders, to provide for cooperative relationships that encourage the most productive enhancement of habitat along the Salt River.

### REINITIATION NOTICE

This concludes formal consultation on the action outlined in the request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat is designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operation causing such take must cease pending reinitiation.

In keeping with our trust responsibilities to American Indian Tribes, we encourage you to continue to coordinate with the Bureau of Indian Affairs in the implementation of this consultation and, by copy of this biological opinion, are notifying the Salt River Pima-Maricopa Indian Community, and the Gila River Indian Community. We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department.

If you have question regarding this BO addendum or the Amendment, please contact Nichole Engelmann or Mike Martinez at 602-242-0210. Please refer to the consultation number 22410-2009-F-0118-R1 in future correspondence concerning this project.

  
for  
Steven L. Spangle

cc: Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ  
Director, Parks and Recreation Department, City of Phoenix, Phoenix, AZ  
Ecc: Salt River Pima-Maricopa Indian Community, Tribal Cultural Resources  
(Attn: Kelly Washington)  
Gila River Indian Community, Tribal Historic Preservation Office (Attn: Barnaby Lewis)

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